

**Factoring Trinomials:  $x^2 + bx + c$** 

$$x^2 + 7x + 10 = (x)^2 + (2 + 5)x + (2)(5) = (x + 2)(x + 5)$$

Factor, write prime if prime.

1.  $x^2 + 6x + 8$

12.  $x^2 - x - 6$

2.  $c^2 + 5c + 6$

13.  $y^2 + 3y - 18$

3.  $y^2 - 9y + 14$

14.  $b^2 + 7b - 18$

4.  $x^2 - 10x + 16$

15.  $a^2 + a - 56$

5.  $a^2 + 12a + 27$

16.  $c^2 - 4c - 12$

6.  $x^2 - 14x + 24$

17.  $x^2 - 9x - 36$

7.  $x^2 - 15x + 36$

18.  $y^2 + 4y - 21$

8.  $y^2 + 21y + 54$

19.  $x^2 - 22x - 75$

9.  $m^2 + 13m - 36$

20.  $x^2 - 3x - 40$

10.  $x^2 - 8x + 15$

21.  $45 + 14y + y^2$

11.  $y^2 - 4y - 32$

22.  $x^2 - 13x + 36$



# Factoring

...More Factoring Trinomials:  $x^2 + bx + c$

$$k^2 - k - 20 = (k)^2 + (4 + -5)k + (4)(-5) = (k + 4)(k - 5)$$

Factor, write prime if prime.

1.  $x^2 + 7x + 12$

11.  $51 - 20k + k^2$

2.  $m^2 + 10m + 21$

12.  $a^2 - 14ab + 24b^2$

3.  $y^2 - 7y - 8$

13.  $y^2 + 6y - 72$

4.  $x^2 - 6x + 5$

14.  $x^2 - 11xy - 60y^2$

5.  $x^2 + 4x - 32$

15.  $15r^2 + 2rs - s^2$

6.  $x^2 - 2x - 15$

16.  $3x^2 + 21xy - 54y^2$   
(Hint: Check for GCF)

7.  $x^2 - 6x + 8$

17.  $x^2 - 5xy - 6y^2$

8.  $y^2 + 9y + 18$

18.  $x^2 + 8xy + 12y^2$

9.  $3 - 4t + t^2$

19.  $y^2 - 7xy + 10x^2$

10.  $v^2 + 12v + 20$

20.  $a^2 - 11ab - 60b^2$